

INTRODUCTION



The ATS Program is guided by the goals established by Caltrans in pursuing its mission and in realizing the vision of effective, safe and environmentally sound mobility for the people of California. The mission and goals are defined in the plan, as is a vision of technology's promise for transportation that is shared by the program's public and private partners. That vision addresses all forms of transportation—people, goods and information movement—and is user service oriented. The ATS Program Plan presents a 15-year picture of the evolution of the transportation system toward its 21st century vision. The state initiatives and the department's five-year program outlined in the plan are geared specifically toward delivering a broad range of user services over this evolutionary path. Early deployment opportunities are identified and take the form of public services, products available in the marketplace, and cooperative public/private systems. When developed and deployed, the technologies proposed in the plan will lead to a substantially more productive and integrated transportation system for California.

Technology applications addressed by the ATS Program include intermodal facilities, traveler information services, telecommunications, advanced transportation and fleet management, vehicle control, transportation systems automation, alternative vehicles, and maintenance and construction. These would: provide transportation users with comprehensive system information and services;

coordinate and optimize freeway and signalized street operations; facilitate telecommuting, real-time ridesharing and electronic payment; reduce accidents through collision avoidance systems; and automate highway maintenance and operations. Fleet operators, including transit providers, could greatly improve their productivity and offer expanded services better tailored to their clients' needs. Options for modal linking would also be expanded. In the longer term, a new unified transportation system could emerge that optimally matches mobility need with mode, and integrates clean and efficient propulsion technologies.

The ATS Program encompasses technology research, development, testing, standards setting and initial deployment. It also addresses user needs, and institutional, legal, market and other issues that impact successful achievement of the ATS vision. The five-year program reflects the breadth and complexity of activities. The size of the existing program is a reflection of the currently authorized budget. The proposed program is based on required activities, increases in state support for the program, the availability of federal ISTEA funding and a reasonable degree of public/private cost-sharing by the department's ATS partners.

Features of the Program

Critical to the success of the ATS Program is the ability to use available resources in the most cost-effective manner possible. Because funding is limited, it will be crucial to accurately identify which activities are in progress, which are in the planning stage and which have been targeted for near-term development and deployment. This process cannot be done without investigating and categorizing the activities of all 50 states and then working with local and regional partners to establish realistic priorities for California's part in the national picture. This information will be included in subsequent updates of the program plan. The information and input gathered during the statewide and national review of this document by the department's partners will be vital to the success of this process.

Where feasible, the ATS Program takes a "building block" approach to technology. Using computer, telecommunications, sensor, and other "smart" technologies, upgradable, stand-alone systems can be deployed to provide near-term benefit. Integrating these building blocks will generate more comprehensive and effective systems further down the evolutionary path. It will also permit much more robust "packaging" of applications, greatly expanding the options for addressing multiple modes, intermodalism and specific policy objectives. This approach, however, will require adherence to interface standards and protocols organized under an overall systems architecture. The plan outlines these requirements.

Caltrans is committed to integrating new technology development into the transportation planning process to facilitate deployment of advanced transportation systems and to using a continuing pro-

gramming process in implementing the ATS Program. Management of the program and execution of the work plan include:

- Serving the needs of the user/customer as the principal focus;
- Developing ATS partnership teams in all Caltrans districts to gain an early commitment from those involved in the transportation planning and programming processes at the state, regional and local levels to consider the many options made available by new technology development and to incorporate those options and technologies into their transportation plans;
- Using those partnership teams to gain regional acceptance and coordination;
- Establishing the California Alliance for Advanced Transportation Systems (CAATS) to bring public and private sector partners together to pursue and coordinate ATS activities in the state;
- Consolidating and/or broadening the agendas of existing partnerships to include the consideration of Intelligent Transportation Systems (ITS) technologies whenever and wherever possible;
- Participating in national ATS activities including membership in ITS America; the systems architecture team; and in the National Automated Highway System Consortium (NAHSC);
- Cooperating with the national standards and protocols development efforts;
- Preparing annual ATS Program reports on program accomplishments and recommending activities for the following year; and,
- Conducting periodic updates to the ATS Program Plan.

The ATS Program Plan is organized into four main sections. The **“Background”** section includes an overview of the problems and challenges that California faces, summarizes the department’s mission in light of these, and discusses how the ATS Program fits within that mission along with program overview, goals, vision, and roles. Next, the **“Fifteen-Year ATS Deployment Overview”** details the elements of advanced transportation systems and defines an evolutionary path toward the ATS vision to which all partners must contribute. Benefits and costs are estimated.

The **“Realizing the Vision”** section starts to focus on state actions required: discussing institutional issues, proposing state policy and legislative initiatives to address these issues, and outlining ATS Program delivery strategies and organization. Finally, the **“Five-Year Program”** details current year activities within the Caltrans program and lays out an activity plan with anticipated milestones for the following four fiscal years. Program resource needs are also discussed.

